



Latham Science Communication Project

4-1-2019

A Battle in Your Body: The Story of Your Immune System

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I found that kids have not been taught much about the immune system and how it works to keep individuals healthy. I believed a book would be a fun way to teach some immunology, which would hopefully lead to a population that would be open to talking immunotherapies. My goal was to familiarize children with immune cells and some of the actions they take against pathogens. I also wanted to convey that the immune system is truly a system of cells all working together through intricate communications and regulated pathways.

My main audience was 10-12-year olds. I thought they would be able to grasp the concepts, but still enjoy a fun book. I wanted the book to be accessible to adults as well, but I thought targeting a younger audience would build the foundation to learn more about the immune system later in life.

The process of developing the book involved the evolution of drafts throughout the semester. First, I wrote a sequence of events that could happen during an immune response (Image 1). Because the immune system is complex, there are numerous events and cells that could be involved depending on the nature of the infection. In the book, I decide to follow the events that could happen in response to an extracellular bacterial infection. I originally wanted to use a metaphor to describe the cell types, their communication, and their localization to the infection, but after brainstorming (Image 2), I realized that would be too convoluted, so I wrote out my original draft (Image 3) in a very straight-forward way. Next, I made my index-card storyboard. This storyboard was very dynamic and allowed me to add and take out cards, shuffle the order, modify the wording, and provide sketches throughout the revision process (Image 4). The sketches were originally just a placeholder that would be modified by my illustrator, but my instructors and peers were in support of keeping the illustrations 'simple and cute' like my sketches, so the images on the index cards ended up being the template for the final illustrations.

After my illustrator and I finished the images, I had .jpgs to make into a book. Here, I began to figure out how to use Kindle Direct Publishing (KDP) to format and upload the book. I was surprised how much time I ended up spending on the 'inconsequential' details like the title pages, back cover, author page, and such. I finished formatting and submitted it for approval. I had to redo a few things, such as sizing and fixing bugs that came with the template, but I was approved, and my book was put on Amazon.

The final step of my project this semester was the reading at the STEM-focused Girl Scout troop with 11-year olds (Image 5). I set up a time to Skype and read my book. I had a few questions for a Q&A afterwards, but I first opened the floor if they had any general feedback. They mostly wanted to know about college in general, which I was initially surprised about, but most of our conversation was about my major and what parts of college were fun. While this is not the feedback I was hoping for, I think it was best for the girls and was a good example of the different ways students can participate in STEM.

I hope to make a second edition of the book after getting more feedback about what would be necessary to make this book better for kids or for an immunology curriculum. Some of my goals for a second edition would be relating the immune system back to the illness, introducing other

ways the immune system fights pathogens, or bringing up the idea of memory. (further discussed in Audio 1)

I really enjoyed my project and feel I learned about book publishing and different ways to think of immunology. It was interesting to think about the whole immune system in a big-picture way and how the cells work together. And, of course, I did not know anything about formatting, illustrating, or publishing a book before this project. I feel this semester I mostly learned about the process of making the book and all the little details that need to be completed. For this reason, I believe a second version of the book would have fuller content because I could focus more on content than the book-making itself.